

Claims:

1. (Previously presented.) A thermal insulating composition, comprising:

- (a) at least one water-superabsorbent polymer capable of absorbing a minimum of its own weight in water;
- (b) a viscosifying polymer; and
- (c) water and/or brine.

2. (Original.) The thermal insulating composition of Claim 1, wherein the at least one water-superabsorbent polymer is capable of absorbing a minimum of 20 times its own weight in water.

3. (Original.) The thermal insulating composition of Claim 2, wherein the at least one water-superabsorbent polymer is capable of absorbing a minimum of 100 times its own weight in water.

4. (Original.) The thermal insulating composition of Claim 3, wherein the at least one water-superabsorbent polymer is capable of absorbing a minimum of 700 times its own weight in water.

5. (Original.) The thermal insulating composition of Claim 4, wherein the at least one water-superabsorbent polymer is capable of absorbing a minimum of 1,000 times its own weight in water.

6. (Original.) The thermal insulating composition of Claim 1, wherein the at least one water-superabsorbent polymer comprises an alkali metal salt of an aqueous alcoholic alkali saponified cross-linked homopolymer of acrylonitrile or methacrylonitrile.

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7. (Original.) The thermal insulating composition of Claim 6, wherein the cross-linked homopolymer of acrylonitrile or methacrylonitrile is cross-linked with N,N'-methylene-bis-acrylamide.

8. (Original.) The thermal insulating composition of Claim 6, wherein the at least one water-superabsorbent polymer is an alkali metal salt of an aqueous methanolic alkali saponified cross-linked homopolymer of acrylonitrile or methacrylonitrile.

9. (Original.) The thermal insulating composition of Claim 1, wherein the at least one water-superabsorbent polymer is an alkali metal salt of an aqueous alcoholic saponified crosslinked polymer of 2-propenenitrile or 2-methyl-2-propenenitrile.

10. (Original.) The thermal insulating composition of Claim 1, wherein the at least one water-superabsorbent polymer is selected from the group consisting of:

(a) polymers resulting from the polymerization of water-soluble ethylenically unsaturated monomers, with partial crosslinking;

(b) starch-grafted polyacrylates;

(c) acrylamide/acrylic acid copolymers and salts thereof;

(d) starch-grafted acrylamide/acrylic acid and salts thereof;

(e) isobutylene/maleic anhydride copolymers;

(f) sodium and potassium salts of carboxymethylcellulose;

(g) crosslinked salts of polyaspartic acid; and

(h) chitosan/polyvinylpyrrolidone and chitosan/polyethyleneimine combinations.

11. (Original.) The thermal insulating composition of Claim 10, wherein the acrylamide/acrylic acid copolymers are chosen from sodium salts of acrylamide/acrylic acid copolymers.

12. (Original.) The thermal insulating composition of Claim 10, wherein the starch-grafted acrylamide/acrylic acid is chosen from sodium and potassium salts of starch-grafted acrylamide/acrylic acid.

13. (Original.) The thermal insulating composition of Claim 1, wherein the at least one water-superabsorbent polymer is present in an amount ranging from about 0.05% to about 30% by weight, relative to the total weight of the composition.

14. (Original.) The thermal insulating composition of Claim 13, wherein the at least one water-superabsorbent polymer is present in an amount ranging from about 0.2% to about 20% by weight, relative to the total weight of the composition.

15. (Previously presented.) The thermal insulating composition of Claim 1, further comprising a polyol, a biocide and/or corrosion inhibitor.

16. (Previously presented.) The thermal insulating composition of Claim 1, further comprising a crosslinking agent.

17. (Original.) The thermal insulating composition of Claim 16, wherein the crosslinking agent contains a borate, zirconium IV or titanium IV.

18. (Original.) The thermal insulating composition of Claim 1, wherein the viscosity of the composition is sufficient to reduce the convection flow velocity of the composition upon introduction into the annulus.

19. (Previously presented.) The thermal insulating composition of Claim 1, wherein the viscosity of the composition is sufficient to at least partially immobilize the fluid.

20. (Previously presented.) The thermal insulating composition of Claim 1, wherein the viscosifying polymer is a polysaccharide or a homo-, block or

random polymer containing vinyl alcohol, acrylate, pyrrolidone, 2-acrylamido-2-methylpropane sulfonate, or acrylamide units.

21. (Original.) The thermal insulating composition of Claim 15, wherein the polyol is a glycerol, glycol or a polyglycol.

22. (Original.) The thermal insulating composition of Claim 21, wherein the glycol is ethylene glycol or propylene glycol.

23. (Original.) The thermal insulating composition of Claim 20, wherein the polysaccharide is cellulose, starch, galactomannan gum, xanthan, succinoglycan or scleroglucan or a derivative thereof.

24. (Previously presented.) The thermal insulating composition of Claim 23, wherein the polysaccharide is alkylcellulose, hydroxyalkyl cellulose, alkylhydroxyalkyl cellulose, carboxyalkyl cellulose derivative, guar gum, hydroxypropyl guar, or carboxymethylhydroxypropyl guar.

25. (Original.) The thermal insulating composition of Claim 24, wherein the polysaccharide is methyl cellulose, hydroxyethyl cellulose, hydroxypropyl cellulose, hydroxybutyl cellulose, hydroxyethylmethyl cellulose, hydroxypropylmethyl cellulose, hydroxybutylmethyl cellulose, methylhydroxyethyl cellulose, methylhydroxypropyl cellulose, ethylhydroxyethyl cellulose, carboxyethylcellulose, carboxymethylcellulose or carboxymethylhydroxyethyl cellulose.

26. (Cancelled.)

27. (Cancelled.)

28. (Cancelled.)

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29. (Cancelled.)
30. (Cancelled.)
31. (Cancelled.)
32. (Cancelled.)
33. (Cancelled.)
34. (Cancelled.)
35. (Cancelled.)
36. (Original.) The thermal insulating composition of Claim 1, wherein the at least one water-superabsorbent polymer is selected from:
- (a) an acrylonitrile or methacrylonitrile starch graft copolymer;
  - (b) an alkali metal salt of a saponified granular starch-polyacrylonitrile or starch-polymethacrylonitrile copolymer; and
  - (c) hydrolyzed polyacrylonitrile, polymethacrylonitrile or a copolymer of either acrylonitrile or methacrylonitrile containing less than 50 weight percent of a copolymerizable monomer.
37. (New.) A composition comprising:
- (a) between from about 0.05 to about 20 percent by weight of at least one water-superabsorbent polymer capable of absorbing a minimum of 20 times its own weight in water;
  - (b) between from about 0.1 to about 5 weight percent of viscosifying polymer; and
  - (c) between from about 20 to about 99 weight percent water and/or brine.

38. (New.) The composition of Claim 37, wherein the composition further comprises a polyol.

39. (New.) The composition of Claim 38, wherein the composition comprises between from about 10 to about 80 weight percent of polyol.

40. (New.) The composition of Claim 37, wherein the viscosifying polymer is carboxymethylhydroxypropyl guar.

41. (New.) The composition of Claim 38, wherein the polyol is selected from the group consisting of ethylene glycol, propylene glycol and butylene glycol.

42. (New.) The composition of Claim 37, wherein the composition further comprises a crosslinking metal-releasing agent.

43. (New.) The composition of Claim 37, wherein the composition further comprises a buffer, biocide and/or corrosion inhibitor.

44. (New.) The thermal insulating composition of Claim 1, wherein the water-superabsorbent polymer is a solid particulate, fiber, bead, liquid or paste.

45. (New.) The thermal insulating composition of Claim 44, wherein the water-superabsorbent polymer is a bead or solid particulate having a mean size of less than 20 mm.

46. (New.) A composition comprising:  
(a) at least one water-superabsorbent polymer capable of absorbing a minimum of 20 times its own weight in water; and  
(b) viscosifying polymer  
wherein the composition is substantially free of water.

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